

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION

SK-42

Effective Date: June 1, 2013

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **December 2014**.*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code and the Texas Engineering Practice Act.*

**Tubular Skylights “Sun Effects” Model, Impact Resistant, manufactured by**

**ODL Incorporated**  
**215 East Roosevelt Ave.**  
**Zeeland, Michigan 49464**  
**Telephone: (616) 772-9111**

and distributed by

**Attic Breeze**  
**P.O. Box 1318**  
**1370 FM 116**  
**Gatesville, Texas 76528**  
**Telephone: (254) 865-9999**

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions, the design drawings specified in this evaluation report, and this product evaluation report.

## PRODUCT DESCRIPTION

The Tubular skylights “Sun Effects” are skylights with a polycarbonate dome with an aluminum flashing. The tubular skylights specified in this evaluation report are impact resistant skylight. This product evaluation report is for tubular skylights based on the following tested construction:

### General Description:

System	Description	Label Rating
1	Sun Effects 10” SE 10 S	R-PG100 356 (14) diameter – Type TDD
2	Sun Effects 14” SE 14 S	

### Product Dimensions:

System	Dome Size	Reflective Adjustable Tube Size	Glass Diffuser Lens Assembly	Flashing Size
1	10” x 6 $\frac{3}{4}$ ”	9 $\frac{1}{2}$ ”	12” Diameter	22” Diameter x 6” H
2	14” x 7 $\frac{3}{16}$ ”	13 $\frac{1}{2}$ ”	16” Diameter	26” Diameter x 6” H

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**Glazing Description:**

System	Glass Construction <sup>1</sup>	Glazing Method <sup>2</sup>
1-2	SG-1	GM-1

Note: <sup>1</sup> See the "Glass Construction Key" for the glazing construction.

<sup>2</sup> See the "Glazing Method Key" for the glazing method description.

**Glass Construction Key:**

SG-1: The skylight utilizes a nominal 0.115" thick molded polycarbonate dome. The polycarbonate dome utilizes light diffusers in its construction.

**Glazing Method Key:**

GM-1: The dome is sealed to aluminum flashing with a 0.472" wide by 0.394" thick closed cell gasket. The dome is secured to the flashing with four equally spaced No. 8 x  $\frac{3}{4}$ " screws and self-sealing washers.

**Flashing:** The flashing is constructed of 0.065" thick aluminum.

**Glass Diffuser Lens Assembly Construction:** The assembly is constructed of a plastic ceiling ring that is secured to the ceiling with four screws with flip tabs for the 14" unit and 3 screws with flip tabs for the 10" unit. The face of the plastic ceiling ring against the ceiling utilizes a layer of foam gasket tape along the outer perimeter. The inner perimeter, where the reflective adjustable tube is located, and the inner perimeter of the opposite face of the ceiling ring, where the glass diffuser is located, utilize kerf-mounted hollow bulb seals. Tape is applied to the same surface at three locations to seal three holes through the ceiling ring. The tempered glass diffuser lens is set against a plastic trim piece with a plastic lens on top of the diffuser.

**Product Identification:** A certification program label (Keystone) will be affixed to the skylight. The certification program label includes the performance characteristics and approved inspection agency to indicate compliance with the requirements of AAMA/WDMA/CSA 101/I.S.2/A440-08 and ASTM E 1886 and ASTM E 1996. The certification program label contains two Certification Authorization Report (CAR) numbers located on the right side of the label. The following CAR numbers and model names are located on the label:

**Label Identification:**

System	Model	Certification Authorization Report (CAR) numbers	
		ANSI/AAMA/WDMA 101/I.S.2/A440-08	ASTM E 1886 and ASTM E 1996
1, 2	SE-10S/14S Poly Dome AL Tube Skylight	152-126	152-205

**Impact Resistance:** These skylight assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I zone** and the **Seaward zone**. The skylight assemblies passed Missile Level D specified in ASTM E 1996-05. The skylight assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. These skylight assemblies will not need to be protected with an impact protective system.

**Acceptance of Smaller Assemblies:** Skylight assemblies with dimensions equal to or smaller than those specified in this evaluation report are acceptable within the limitations specified in this report.

## LIMITATIONS

### Design pressures:

System	Dome Size	Design Pressures (psf)
1	10" x 6 $\frac{3}{4}$ "	$\pm 100$
2	14" x 7 $\frac{3}{16}$ "	$\pm 100$

## INSTALLATION INSTRUCTIONS

**General:** The skylight assembly shall be prepared and installed in accordance with the manufacturer's recommended installation instructions, the approved drawings referenced below, and this evaluation report. Detailed installation instructions and component drawings are available from the manufacturer.

**Design Drawings:** The skylights shall be installed in accordance with Drawing No. TX-4233, titled "Attic Breeze Tubular Skylight "Sun Effects" Model," sheets 1 through 2 of 2, dated September 19, 2012, signed and sealed by Lyndon F. Schmidt, P.E on November 8, 2012. The stated drawings will be referred to as the approved drawings in this evaluation report.

**Roof Deck Construction:** The skylights shall be secured to minimum  $\frac{7}{16}$ " OSB.

**Installation:** The skylights shall be installed as specified on Sheets 1 of 2 through 2 of 2 of the approved drawings.

**Note:** The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.